

Memorandum

February 27, 2017

To: Gary Miller and Anne Foster, U.S. Environmental Protection Agency
From: John Laplante, John Verduin, Wendell Mears, and David Keith
cc: Phil Slowiak, International Paper Company
David Moreira, McGinnes Industrial Maintenance Corporation

Re: Post-TCRA Quarterly Inspection Report – January 2017

Introduction

This memorandum reports the results of the January 2017 inspections of the armored cap cover, fencing, signage, buoys, and security cameras installed for the Time Critical Removal Action (TCRA) at the San Jacinto River Waste Pits Superfund Site (TCRA Site).

Background

The TCRA was implemented by International Paper Company and McGinnes Industrial Maintenance Corporation (Respondents) under an Administrative Settlement Agreement and Order on Consent with the U.S. Environmental Protection Agency (USEPA) – Docket No. 06-12-10, effective May 17, 2010. A full description of the TCRA implementation is provided in the following associated project documentation:

- Removal Action Work Plan (Anchor QEA 2010, 2011)
- Revised Draft Final Removal Action Completion Report¹ (RACR; Anchor QEA 2012)

The inspection summarized in this memorandum was conducted in accordance with the Operations, Monitoring, and Maintenance (OMM) Plan (Appendix N of the RACR; Anchor QEA 2012) and a subsequent USEPA-approved amendment to the OMM Plan.² The OMM Plan specifies the timing, pertinent items, tolerances, and procedures for inspection, maintenance, and repair of the armored

¹ David Keith, Ph.D., R.G., C.H.G., Respondents' Project Coordinator, received a RACR (in the form issued by USEPA) from Valmichael Leos via email on August 15, 2012; however, the appendices to the RACR, including the OMM Plan, were not provided to Dr. Keith as part of the document. The OMM Plan had been previously approved by USEPA (in an email from Mr. Leos dated January 18, 2012) and is assumed to remain unchanged. Respondents reserve all rights related to the changes made by USEPA to the Revised Draft Final RACR submitted by Respondents to USEPA on March 9, 2012.

² The OMM Plan was attached to the Draft Final RACR, submitted to USEPA on November 22, 2011, and authorization to implement the OMM Plan was contained in an email from USEPA dated January 18, 2012. The OMM Plan was also attached as an appendix to the Revised Draft Final RACR submitted to USEPA on March 9, 2012. An addendum to the OMM Plan, dated February 29, 2016, was developed to describe the addition of security cameras, their monitoring, and notifications, and approved by USEPA on March 31, 2016.

cap, fencing, and signage installed for the TCRA Site (Figure 1). David Keith, Ph.D., R.G., C.H.G., (Respondents' Project Coordinator) received an email from Gary Miller of USEPA, dated February 16, 2016, directing Respondents to increase the frequency of cap inspections to quarterly until further notice.

Visual Inspection

The visual inspection took place on January 13, 2017, and included evaluation of the following TCRA elements:

- Inspection of the security fence and signage surrounding the TCRA Site
- Inspection of the armored cap visible above the water line of the San Jacinto River
- Visual confirmation that waste materials are not actively eroding into the San Jacinto River
- Inspection of perimeter buoys and security camera system

Photographs of conditions observed during visual inspections are provided in Appendix A. A summary of each facet of the visual inspection is provided in the following sections.

Armored Cap

Photographs of the armored cap from the inspection event are provided in Appendix A (see Photographs 1 through 14). The majority of the Eastern Cell armored cap was underwater at the time of the inspection on January 13, 2017. All the visible portions of the armored cap were observed to be intact, and no movement of cap materials was observed at any location.

Perimeter Fencing

The perimeter fencing (Figure 2) on the west and east banks of the San Jacinto River was visually inspected for breaches or other indications of damage on January 13, 2017. No breaches or indications of fence damage were observed during the inspection of the perimeter fencing around the cap area, north of Interstate-10 (I-10), or the fencing on the east bank or west bank south of I-10. For examples, see Photographs 15 through 17 in Appendix A.

The portion of the fence installed along the south boundary of the San Jacinto River Fleet (SJRF) property was not included in the fencing inspection, because the SJRF property is currently occupied by an active facility that conducts daily security checks, as required by the U.S. Coast Guard and Transportation Security Administration for an active maritime fleeting area.

Signage

"Danger" and "No Trespassing" signs are posted at regular intervals on the perimeter fencing surrounding the TCRA Site. For an example of the "Danger" signs, see Photographs 6 and 8 in

Appendix A. All “Danger” and “No Trespassing” signs were observed to be in place during the January 13, 2017 inspection.

A total of 15 signs were installed at the TCRA Site around the perimeter of the land portion of the TCRA Site; the signs are mounted on steel posts and set in concrete pads. These signs are intended to face the San Jacinto River to deter water-based entry to the TCRA Site. All signs were observed to be in place and facing the correct direction.

Three USEPA Public Notice signs are present around the TCRA Site, located: 1) near the gate entry point for the perimeter fence north of I-10; 2) near a gate entry point south of I-10; and 3) at the end of the Texas Department of Transportation right-of-way north of I-10 near the San Jacinto River. For an example, see Photograph 1 and 16 in Appendix A. These three signs were observed to be in place and undamaged.

Signage on all locked gates reminds entrants to “daisy chain” the locks properly prior to leaving the TCRA Site. These signs were observed to be in place and undamaged. For an example, see Photograph 19 in Appendix A. Table 1 summarizes the results of the inspection of the TCRA Site signage described in this section.

Table 1
TCRA Perimeter Fencing and Sign Inspection Punch List

Task	Status	
	Completed	Date
Perimeter Fence Visually inspect the perimeter fencing on the east and west sides of the San Jacinto River.	Yes	1/13/2017
“Danger” and “No Trespassing” Signs Visually inspect the 15 signs to verify that they remain in place.	Yes	1/13/2017
USEPA Public Notice Signs Visually inspect the 3 signs to verify that they remain in place.	Yes	1/13/2017
Daisy Chain Signs Visually inspect the 2 signs to verify that they remain in place.	Yes	1/13/2017

Perimeter Buoys

Permanent warning buoys were installed around the perimeter of the armored cap, as outlined in the letter from Respondents’ Project Coordinator dated February 16, 2016 (Anchor QEA 2016a). The perimeter buoy system was visually inspected and found to be intact on January 13, 2017. See Photographs 3 and 4 in Appendix A for examples.

Security Cameras

Security cameras, installed as outlined in an addendum to the OMM Plan (Anchor QEA 2016b), were also inspected on January 13, 2017. The security camera system was present and operating normally during the inspection. For examples, see Photographs 6, 7, and 13 in Appendix A.

Surveys

Portions of the armored cap above the water surface or at a water depth too shallow to access by boat were surveyed using land-based topographic survey techniques. The topographic and bathymetric surveys began on December 22, 2016, and were completed on January 26, 2017. The surveyor followed the track line spacing, measurement intervals, and accuracy requirements detailed in the OMM Plan (Anchor QEA 2012) for all survey work.

Survey Tolerance Requirements

The OMM Plan (Anchor QEA 2012) requires that each survey be compared with the prior completed survey using the following criteria:

1. Areas with elevations that are within 6 inches of the previous survey require no action.
2. Contiguous areas with elevation changes exceeding plus or minus 6 inches trigger a review of the survey benchmarks for accuracy or movement.
3. Areas where surveyed elevations are 6 inches higher or lower than the prior survey for a contiguous area larger than 30 feet by 30 feet will require probing to measure the cap thickness.

Survey Results

The survey data from the October 2016 inspection survey and the January 2017 inspection survey were compared to evaluate the differences in the top of the armored cap elevation. These differences are shaded and shown on Figure 3. The survey results indicate continued deposition and erosion of alluvial sediment on the surface of the cap.

The OMM Plan (Anchor QEA 2012) calls for manual probing of armored cap thickness in contiguous areas larger than 30 feet by 30 feet identified by the topographic or bathymetric surveys as more than 6 inches higher or lower in elevation as compared to the prior survey. When the October 2016 and January 2017 surveys were compared, the results indicated that there were several areas of the armored cap that had elevation changes greater than 6 inches (Figure 3). Three separate evaluations were completed to determine the potential cause and effect of these elevation changes, including the following:

1. A comparison of the October 2016 inspection survey and the January 2017 quarterly inspection survey results. A visual inspection of exposed areas of the armored cap during an exceptionally low tide on January 23, 2017

2. Probing of the largest area of elevation change (approximately 1,900 square feet) on February 3, 2017

The following provides a summary of these evaluations.

Comparison of Previous Inspection Surveys and the January 2017 Quarterly Inspection Survey Results

Figure 4 shows the survey results for the October 2016 quarterly inspection. The light and dark blue areas on this figure indicate there was a significant amount of sediment deposition that occurred in the period between the July 2016 and October 2016 quarterly inspections. The elevation changes seen in the January 2017 survey compared to the October 2016 survey (Figure 3) are likely due to transport and removal of fine-grained material that had deposited on the cap in the previous quarter during a high flow event or events.

January 23, 2017 Visual Inspection

Daleel Nangju of Anchor QEA, LLC, and Terry Andrews with the Texas Commission on Environmental Quality conducted a joint visual inspection of the armored cap at the Site on January 23, 2017, following a seasonal storm passing the area. During that inspection, the tides were extremely low, providing an opportunity for visual inspection of areas that are typically inundated. The team preliminarily identified seven small areas in the Eastern Cell where geotextile could be seen. Several locations of visible geotextile were also noted at the edges of previous maintenance areas and at the western edge of the armored cap; however, the remainder of the cap appeared to be undisturbed and fully intact, including areas of the Eastern Cell that showed elevation changes between the October 2016 and January 2017 surveys.

As a result of these observations, David Keith of Anchor QEA contacted Gary Miller, the USEPA Remedial Project Manager, by phone on January 23, 2017, to report the inspection findings. Mr. Miller agreed the Respondents should prepare a probing and maintenance work plan to address the areas with exposed geotextile. A description of the additional inspection and maintenance of those areas is provided in Attachment 1 of this report.

February 3, 2017 Additional Probing within the Eastern Cell

One contiguous area of significant elevation change in the Eastern Cell, shown on Figure 3, was covered in water during the visual inspection that occurred on January 23, 2016. The net elevation changes observed between the July 2016 – October 2016 and the October 2016 – January 2017 surveys in this area were minimal; however, because of the contiguous nature of the degree of elevation change in this area, the Respondents manually probed the area on February 3, 2017. The probing proceeded along four transects spaced equally across the area. The locations of the transects are shown on Figure 3. The probing indicated there was up to 6 inches of silt overlying the

cap, but the underlying cap was intact and cemented by biological growth and mineral precipitation. No maintenance was necessary. The elevation change in the area identified is attributed to gradual buildup of silt on the armored cap over time and removal of a portion of that silt between the October 2016 and January 2017 surveys of the cap. As mentioned before, it is likely the silt washed away during a high-flow event that occurred between the October 2016 and January 2017 survey. There was no evidence of movement of actual cap materials.

Inspection Summary

The post-TCRA inspections during January 2017 did not reveal damage to the perimeter fence, signage, or security camera system. The results of the January 2017 survey showed there were net negative elevation changes over parts of the armored cap compared to the October 2016 survey results. The October 2016 survey indicated net depositional conditions occurred in the period between July 2016 and October 2016. These results are indicative of the deposition of fine-grained sediments on the cap during more quiescent periods, and subsequent removal during higher-flow events. These observations were further confirmed during a visual inspection of the armored cap during an exceptional low tide on January 23, 2017 that allowed observation of large portions of the armored cap that are normally submerged, and additional manual probing of a submerged portion of the armored cap on February 3, 2017. Maintenance was performed in six small areas of the cap in the Eastern Cell based on the January 23, 2017 visual inspection; however, the remainder of the armored cap was intact and undisturbed. The additional probing and maintenance activities that resulted from the January 23, 2017 low tide inspection are summarized in Attachment 1. The armored cap and perimeter buoy system remain intact.

Figures

- Figure 1 Vicinity Map
- Figure 2 Fence and Warning Sign Layout
- Figure 3 January 2017 Quarterly Inspection Survey
- Figure 4 October 2016 Quarterly Inspection Survey

Appendix

Appendix A – Inspection Photographic Log

Attachment

Attachment 1 – January 2017 TCRA Probing and Maintenance Completion Report

References

- Anchor QEA (Anchor QEA, LLC), 2010. *Removal Action Work Plan, San Jacinto River Waste Pits Superfund Site*. Prepared for U.S. Environmental Protection Agency (USEPA) Region 6 on behalf of McGinnes Industrial Maintenance Corporation (MIMC) and International Paper Company (IPC). November 2010.
- Anchor QEA, 2011. *Removal Action Work Plan, San Jacinto River Waste Pits Superfund Site*. Prepared for U.S. Environmental Protection Agency (USEPA) Region 6 on behalf of MIMC and IPC. Revised February 2011.
- Anchor QEA, 2012. *Revised Draft Final Removal Action Completion Report, San Jacinto River Waste Pits Superfund Site*. Prepared for MIMC, IPC, and USEPA Region 6. Revised March 2012.
- Anchor QEA, 2015. Draft Amendment 1, Operations, Monitoring and Maintenance Plan, San Jacinto River Waste Pits Time Critical Removal Action. Memorandum to Gary Miller, USEPA, from David Keith, Anchor QEA, LLC. December 3, 2015.
- Anchor QEA, 2016a. Letter from D. Keith to G. Miller, USEPA, regarding Site Buoy Enhancement for San Jacinto River Waste Pits Superfund Site. February 16, 2016.
- Anchor QEA, 2016b. Addendum 2, Operations, Monitoring, and Maintenance Plan, San Jacinto River Waste Pits Time Critical Removal Action (Proposed Camera Security System Memorandum). February 29, 2016.
- USEPA (U.S. Environmental Protection Agency), 2010. *Administrative Settlement Agreement and Order on Consent for Removal Action*. U.S. Environmental Protection Agency Region 6 CERCLA Docket No. 06-03-10. In the matter of: San Jacinto River Waste Pits Superfund Site Pasadena, Harris County, Texas. IPC & MIMC, Respondents.

Figures

K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits_Quarterly Inspection Reports\2017-01\0557-QIR-001.dwg Vicinity Map
Feb 06, 2017 4:16pm dholmer

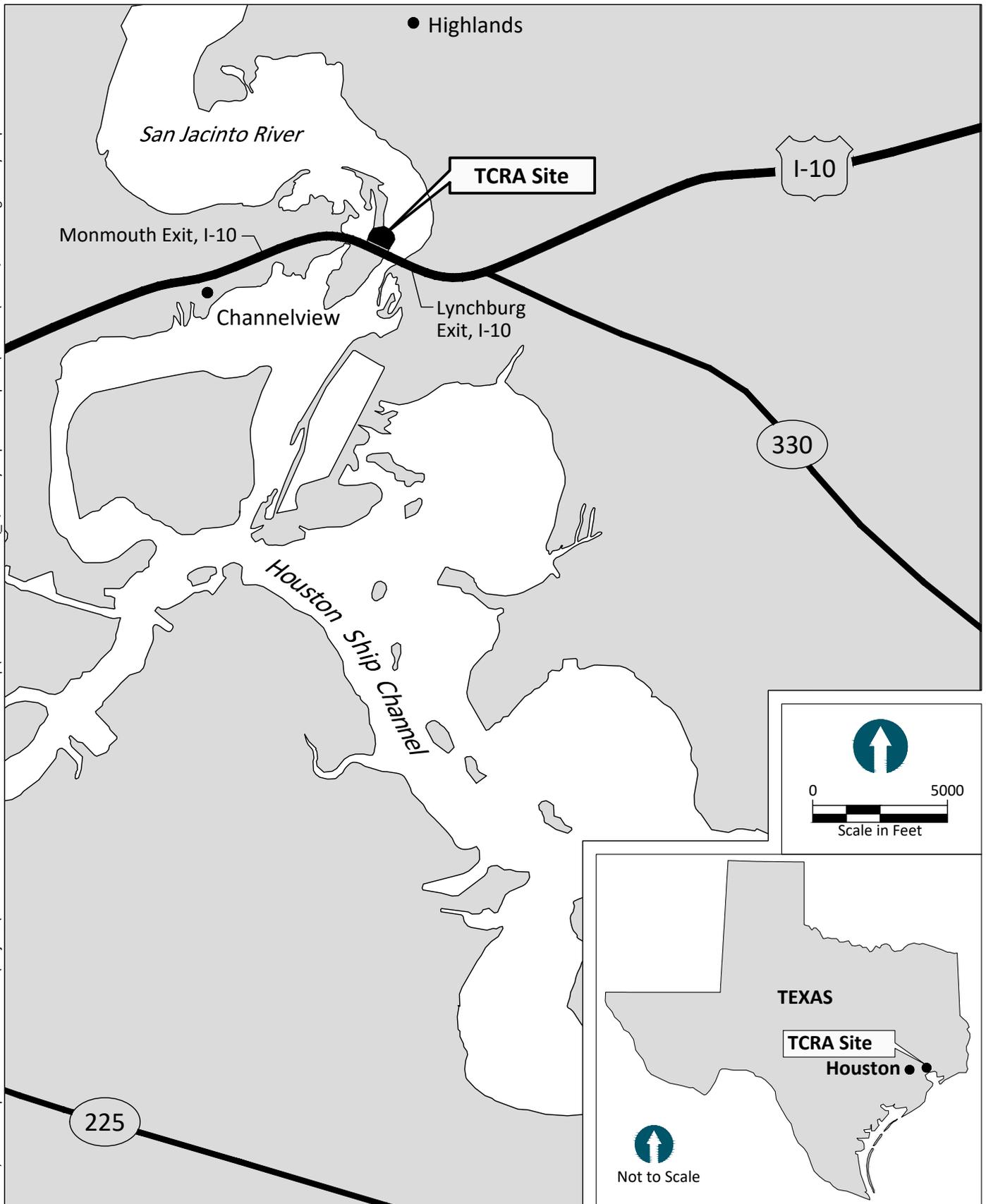
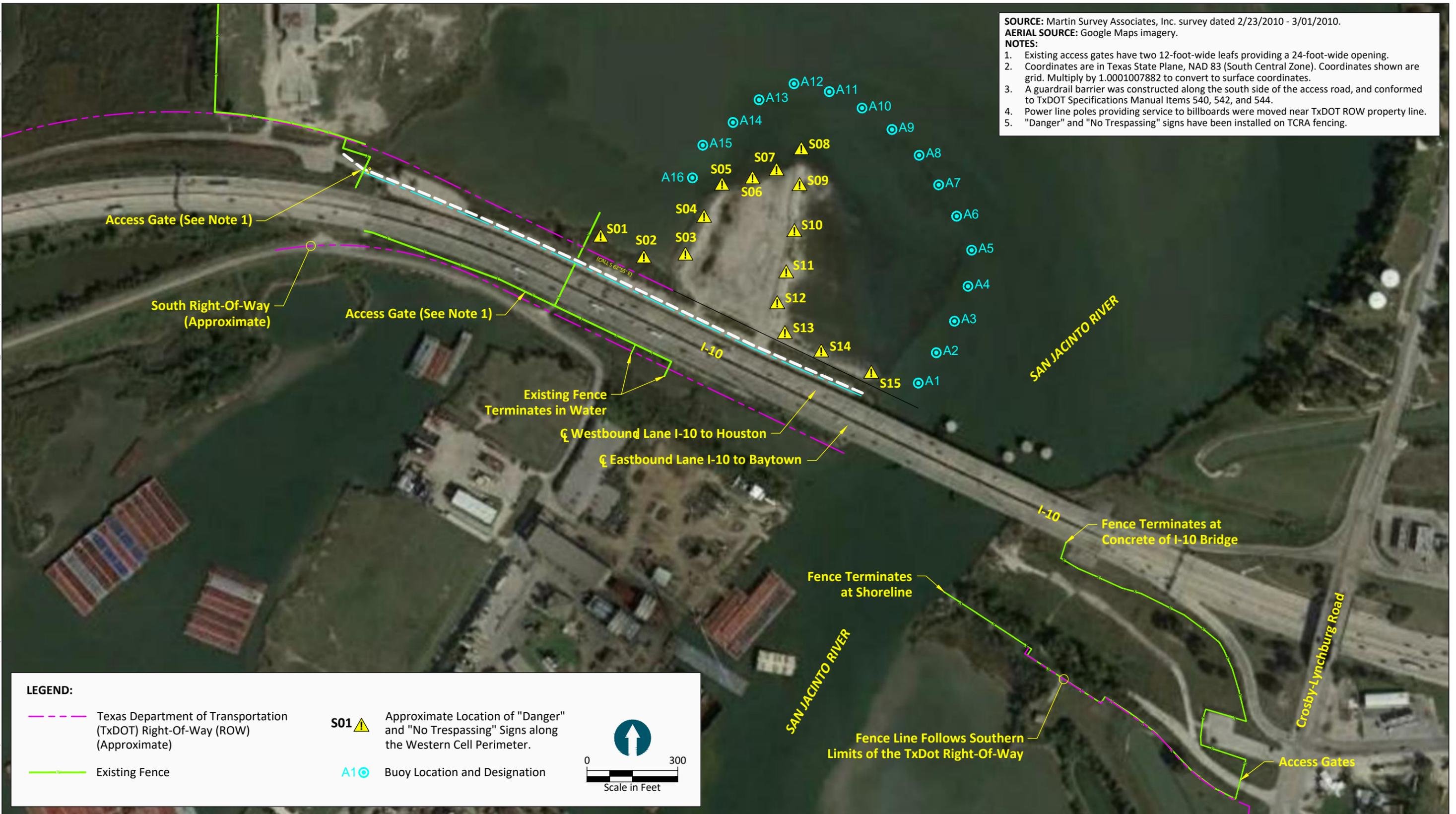


Figure 1
Vicinity Map
Post-TCRA Quarterly Inspection (January 2017)
San Jacinto River Waste Pits Superfund Site

K:\Projects\0557-McGinnes Industrial Maintenance Corp\San Jacinto Waste Pits\Quarterly Inspection Reports\2017-01\0557-QIR-002.dwg Fence and Warning Sign Layout
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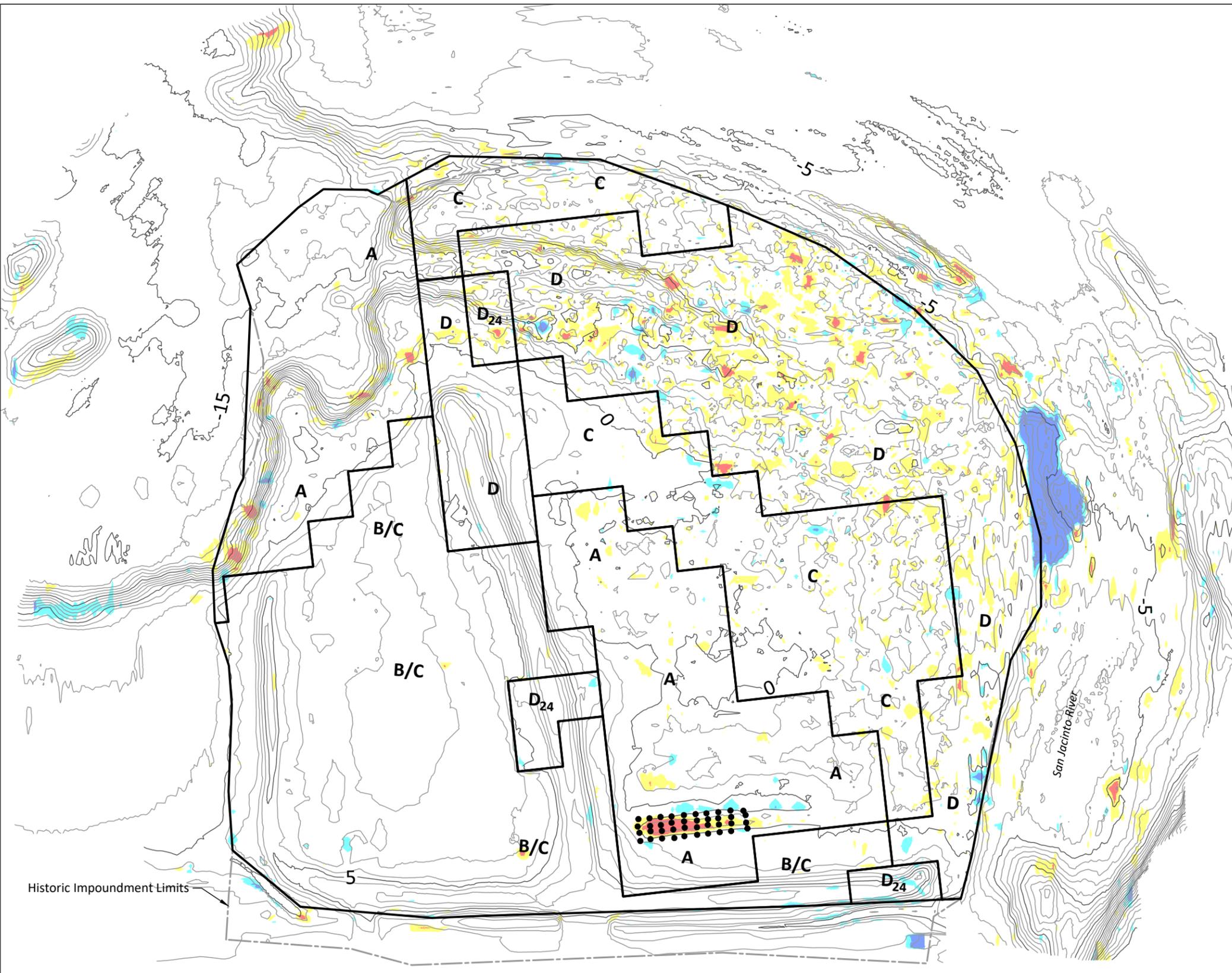
SOURCE: Martin Survey Associates, Inc. survey dated 2/23/2010 - 3/01/2010.
AERIAL SOURCE: Google Maps imagery.
NOTES:
 1. Existing access gates have two 12-foot-wide leaves providing a 24-foot-wide opening.
 2. Coordinates are in Texas State Plane, NAD 83 (South Central Zone). Coordinates shown are grid. Multiply by 1.0001007882 to convert to surface coordinates.
 3. A guardrail barrier was constructed along the south side of the access road, and conformed to TxDOT Specifications Manual Items 540, 542, and 544.
 4. Power line poles providing service to billboards were moved near TxDOT ROW property line.
 5. "Danger" and "No Trespassing" signs have been installed on TCRA fencing.

LEGEND:

- Texas Department of Transportation (TxDOT) Right-Of-Way (ROW) (Approximate)
- Existing Fence
- S01** Approximate Location of "Danger" and "No Trespassing" Signs along the Western Cell Perimeter.
- A1** Buoy Location and Designation

Scale in Feet

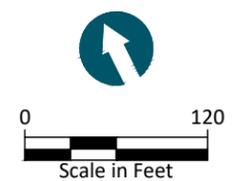
Figure 2
 Fence and Warning Sign Layout
 Post-TCRA Quarterly Inspection (January 2017)
 San Jacinto River Waste Pits Superfund Site



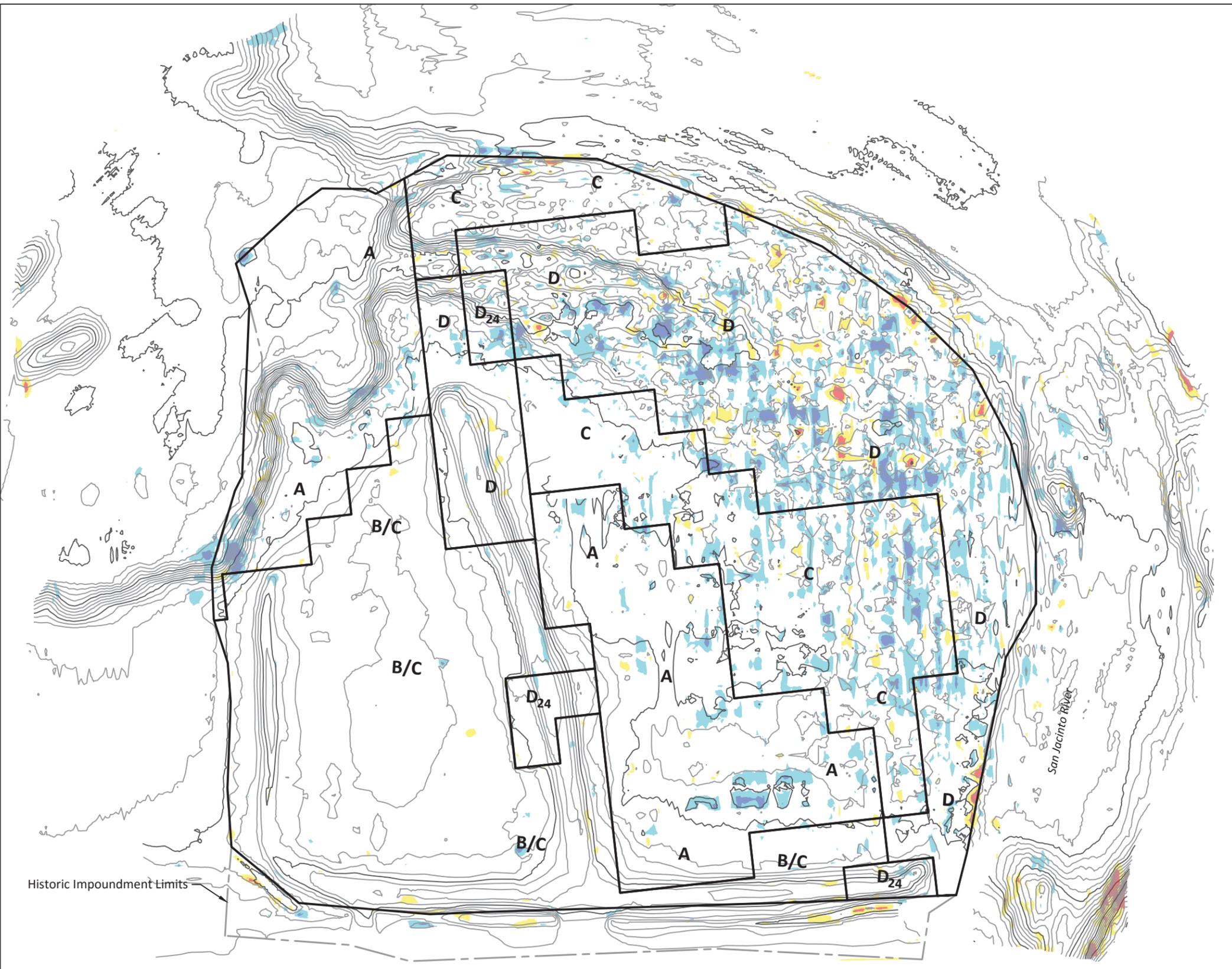
LEGEND:

- January 2017 Bathymetric and Topographic Contours (1 Foot Interval)
- Armored Cap Type and Boundary
- Historic Impoundment Limits
- February 2017 Probing Locations
- > 1.0 Foot Increase
- 0.5 Foot Increase to 1.0 Foot Increase
- 0.5 Foot Increase to 0.5 Foot Decrease
- 0.5 Foot Decrease to 1.0 Foot Decrease
- > 1.0 Foot Decrease
- Example 30'x30' Area

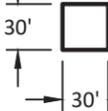
SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated October 2016 and January 2017.
HORIZONTAL DATUM: Texas State Plane South Central, NAD83, U.S. Feet.
VERTICAL DATUM: NAVD 88.



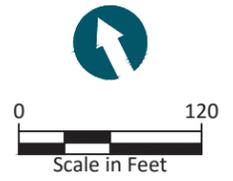
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Nov 13, 2016 4:00pm dholmer



LEGEND:

-  October 2016 Bathymetric and Topographic Contours (1 Foot Interval)
-  Armored Cap Type and Boundary
-  Historic Impoundment Limits
-  > 1.0 Foot Increase
-  0.5 Foot Increase to 1.0 Foot Increase
-  0.5 Foot Increase to 0.5 Foot Decrease
-  0.5 Foot Decrease to 1.0 Foot Decrease
-  > 1.0 Foot Decrease
-  Example 30'x30' Area

SOURCE: Drawing prepared from surveys provided by Hydrographic Consultants dated July 2016 and October 2016.
HORIZONTAL DATUM: Texas State Plane South Central, NAD83, U.S. Feet.
VERTICAL DATUM: NAVD 88.



Appendix A

Inspection Photographic Log



Photograph 01: USEPA Public Notice Sign located near southern berm (view south-west)



Photograph 02: Southern berm and Eastern Cell (view west)



Photograph 03: Eastern Cell (view north)



Photograph 04: Warning buoys along eastern edge located along Eastern Cell (view northeast)



Photograph 05: Central berm (view north)



Photograph 06: Warning sign located along central berm (view southwest)



Photograph 07: Security camera system located along central berm (view north)



Photograph 08: Warning sign located along central berm (view southwest)



Photograph 09: Warning buoys along northern edge of armor cap (view north)



Photograph 10: Northern edge of Western Cell (view southwest)



Photograph 11: Western berm (view north)



Photograph 12: Warning sign along western berm and interior of Western Cell (view north)



Photograph 13: Security camera system located on western portion of southern berm (view east)



Photograph 14: Interior of Western Cell (view north)



Photograph 15: Perimeter fence located south of I-10 on west bank (view west)



Photograph 16: USEPA Public Notice Sign located south of I-10 on west bank (view north)



Photograph 17: Perimeter fence located south of I-10 on west bank (view northeast)



Photograph 18: Construction activities observed inside area south of I-10 on east bank (view west)



Photograph 19: Signage and access gate located south of I-10 on east bank (view west)



Photograph 20: Close-up view of replaced lock on access gate located south of I-10 on east bank

Attachment 1
January 2017 Probing and Maintenance
Completion Report

Memorandum

February 27, 2017

To: Gary Miller, U.S. Environmental Protection Agency

From: David Keith, Wendell Mears, John Laplante, John Verduin, and Rick Coupe, Anchor QEA, LLC

cc: Dave Moreira and Judy Armour, McGinnes Industrial Maintenance Corporation
Phil Slowiak, International Paper Company

Re: San Jacinto River Waste Pits TCRA Armored Cap Probing and Maintenance Completion Report

Introduction

This document provides a summary of visual inspection, probing, and maintenance activities completed on the armored cap installed as part of the Time Critical Removal Action (TCRA) at the San Jacinto River Waste Pits Superfund Site (TCRA Site). The TCRA was implemented by International Paper Company and McGinnes Industrial Maintenance Corporation (collectively, the Respondents) under an Administrative Settlement Agreement and Order on Consent (AOC) with the U.S. Environmental Protection Agency (USEPA) – Docket No. 06-12-10, effective May 17, 2010 (USEPA 2010).

The inspection, probing, and maintenance activities described in this report took place pursuant to a USEPA-approved Maintenance Work Plan (Anchor QEA 2017) and the USEPA-approved Operations, Monitoring, and Maintenance Plan for the TCRA (Anchor QEA 2010).

Cap Inspection and Repair Activities

Low-tide Visual Inspection: Monday, January 23, 2017

Daleel Nangju of Anchor QEA, LLC, and Terry Andrews with the Texas Commission on Environmental Quality conducted a joint visual inspection of the armored cap at the TCRA Site on January 23, 2017, following a seasonal storm passing the area.

During that inspection, the tides were extremely low, providing an opportunity for visual inspection of areas that are typically covered by water. The team preliminarily identified seven small areas in the Eastern Cell where geotextile could be seen (see Figure 1). Several locations of visible geotextile were also noted at the edges of previous maintenance areas and at the Western edge of the armored cap.

As a result of these observations, David Keith of Anchor QEA contacted Gary Miller, the USEPA Remedial Project Manager, by phone on January 23, 2017, to report the inspection findings.

Mr. Miller agreed the Respondents should prepare a Maintenance Work Plan to address those areas. Anchor QEA provided oversight for all Site activities described below.

Mobilization and Preparation for Maintenance Activities: January 24 – 26, 2017

On January 24, 2017, the Respondents engaged one of the TCRA Site on-call contractors, Benchmark Ecological Services, Inc., to perform any required maintenance on the areas preliminarily identified during the low-tide visual inspection of January 23, 2017. In coordination with channel maintenance efforts at the TCRA Site, one truckload (approximately 10 cubic yards) of Type C armor stone for use during maintenance activities was delivered to the TCRA Site by USA Environment from the stockpile at the Bluebonnet Landfill facility on January 25, 2017.

Pre-mobilization activities included reviewing the Site Health and Safety Plan and insurance certificates; notifying and coordinating with the Texas Department of Transportation regarding access on January 25, 2017; ordering materials and equipment; and submitting a Maintenance Work Plan to USEPA for approval on January 26, 2017 (Attachment 1). USEPA approved the Maintenance Work Plan on January 26, 2017 (Attachment 2). The Respondents notified USEPA of the field schedule by phone on January 25, 2017, and the schedule was included in the Maintenance Work Plan submitted to and approved by USEPA on January 26, 2017.

Maintenance Event: Friday, January 27, 2017

Maintenance activities took place on January 27, 2017. The Daily Report in Attachment 3 provides a complete list of personnel, equipment, and activities involved in the maintenance event. The event began with a tailgate safety meeting for all personnel. All maintenance activities were carried out in accordance with the USEPA-approved Maintenance Work Plan (Anchor QEA 2017).

Following mobilization to the TCRA Site, maintenance locations on the Eastern Cell that were above the waterline were marked with rebar or wooden stakes, and the locations that were under water were located by probing with wooden stakes and then placing a 0.5-inch by 10-foot steel rebar probe rod to confirm the location.¹ These locations were physically marked and recorded with a Differential Global Positioning System unit. An all-terrain vehicle was mobilized to the TCRA Site to transfer the Type C armor stone from the temporary on-site stockpile created by USA Environment, located at the junction of the central and southern berms, to areas along the cap near the respective

¹ The Maintenance Work Plan identified seven potential maintenance areas. GPS coordinates for these potential maintenance areas were recorded on January 23, 2017, from the locations where individual photographs of the areas were taken. Upon further inspection during the January 27th maintenance event and a review of the photographs, potential maintenance areas 2 and 7 were determined to be the same location. This location is identified as maintenance area 6 in this report. The coordinates collected in the field during the low-tide inspection of January 23, 2017, represented the closest the field staff were able to reach to the respective potential maintenance areas because of health and safety concerns related to water depth. During the maintenance event, however, the maintenance location coordinates were recorded from directly above the maintenance areas and thus represent the most accurate location information.

maintenance locations. Armor stone was placed in each of the six identified areas that required maintenance until sufficient cap thickness was reached. Each location was then reprobated with the steel rebar probe rod to confirm complete coverage of the area and the presence of minimum thickness above the geotextile of at least 1 foot of armor stone was achieved.

The final Eastern Cell maintenance area locations are shown on Figure 1 and are presented in Table 1.

As stated above, there were also several locations of visible geotextile observed along the western edge of the armored cap on January 23, 2017; this visible geotextile was determined to be excess material at the edges of previous maintenance areas and at the edge of the armored cap. Additional rock was placed in those areas for aesthetic purposes.

Table 1
Maintenance Locations

Maintenance Area	Coordinates ^a		Approximate Size (feet)	Armor Stone Placed
	X	Y		
1	3217215.98409	13857250.8047	2 x 3	Type C
2	3217293.90949	13857544.1145	2 x 3	Type C
3	3217122.92824	13857359.6251	2 x 2	Type C
4	3217205.47938	13857298.2908	2 x 3	Type C
5	3217231.87319	13857330.545	2 x 2	Type C
6	3217277.97601	13857259.5525	2 x 2	Type C

Note:

a. Coordinates provided in NAD83 State Plane – Texas South Central

Demobilization

At the conclusion of the maintenance event, all materials, supplies, and equipment were removed from the TCRA Site with the exception of excess stockpile material of Type C gradation armor stone. This material may be used in a future maintenance event.

Figure

Figure 1 Armored Cap Maintenance Locations

Attachments

Attachment 1 – Respondents’ January 26 Armored Cap Maintenance Work Plan

Attachment 2 – USEPA January 26 Armored Cap Maintenance Work Plan Approval

Attachment 3 – Armored Cap Probing and Maintenance Daily Report

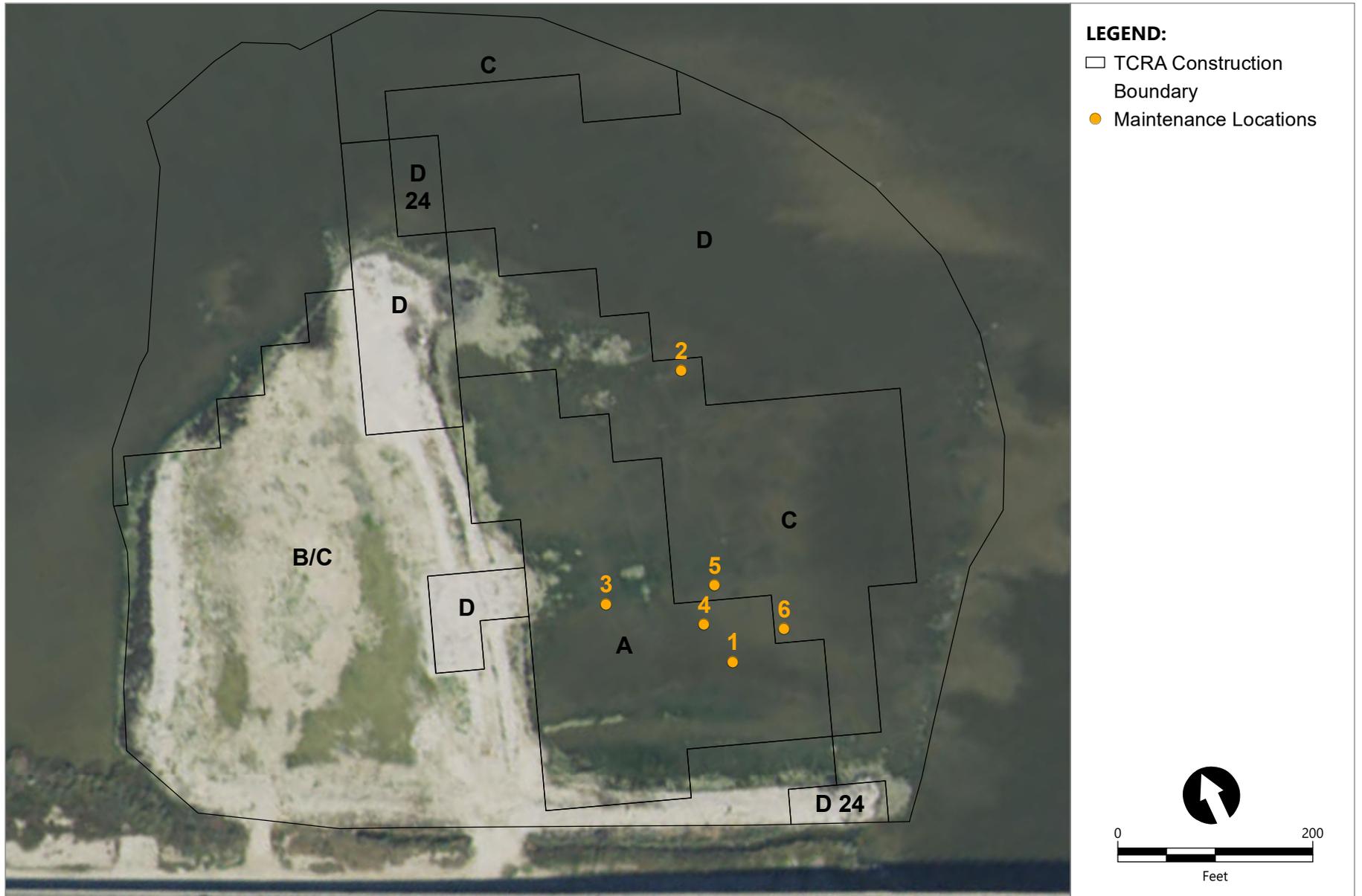
References

Anchor QEA (Anchor QEA, LLC), 2010. *Removal Action Work Plan, San Jacinto River Waste Pits Superfund Site*. Prepared for U.S. Environmental Protection Agency (USEPA) Region 6 on behalf of McGinnes Industrial Maintenance Corporation and International Paper Company. November 2010.

Anchor QEA, 2011. *Removal Action Work Plan, San Jacinto River Waste Pits Superfund Site*. Prepared for U.S. Environmental Protection Agency (USEPA) Region 6 on behalf of McGinnes Industrial Maintenance Corporation and International Paper Company. Revised February 2011.

Anchor QEA, 2017. *January 2017 Maintenance Plan, San Jacinto River Waste Pits Superfund Site*. Prepared for McGinnes Industrial Maintenance Corporation, International Paper Company, and U.S. Environmental Protection Agency (USEPA) Region 6. January 2017.

USEPA (U.S. Environmental Protection Agency), 2010. Administrative Settlement Agreement and Order on Consent for Removal Action. U.S. Environmental Protection Agency Region 6 CERCLA Docket No. 06-03-10. In the matter of: San Jacinto River Waste Pits Superfund Site Pasadena, Harris County, Texas. International Paper Company and McGinnes Industrial Management Corporation, Respondents.



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Figure 1
January 2017 Maintenance Locations
San Jacinto River Waste Pits

Attachment 1

Respondents' January 26 Armored Cap Maintenance Work Plan

January 26, 2017

Gary Miller
Remedial Project Manager
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: January 23 Inspection and Maintenance to the Time Critical Removal Action Armored Cap
San Jacinto River Waste Pits Superfund Site, Channelview, Texas

Dear Gary,

On behalf of McGinnes Industrial Maintenance Corporation and International Paper Company (the Respondents), Daleel Nangju of Anchor QEA, LLC, and Terry Andrews with the Texas Commission on Environmental Quality, conducted a joint visual inspection of the armored cap at the San Jacinto River Waste Pits Superfund Site on January 23, 2017, following a seasonal storm passing the area.

During that inspection, the tides were extremely low, providing an opportunity for visual inspection of areas that are typically inundated. The team identified potential maintenance areas where visible geotextile was found at seven small areas in the eastern cell (see Figure 1). Locations of each of these areas are provided in Table 1, and shown in Photographs 1 through 7. Probing will be conducted at all areas and rock will be placed, if necessary, to ensure the minimum 1-foot thickness of cap material is present at each location.

In addition to the areas shown in Figure 1, there were several locations of visible geotextile noted along the western edge of the Time Critical Removal Action (TCRA; Photograph 8). This visible geotextile appears to be excess material at the edges of previous maintenance areas and at the edge of the armored cap. Additional rock will also be placed in areas that are shown to have adequate rock where there is geotextile overlap from previous maintenance events for aesthetic purposes, even if adequate armor is found beneath the visible geotextile.

Maintenance Plan

The following provides a brief synopsis of the proposed maintenance plan to address these areas. The maintenance will be performed in accordance with procedures utilized in previous maintenance events for similar issues. Anchor QEA staff and Benchmark Ecological Services, the maintenance contractor, will perform additional probing in each of the potential maintenance areas to confirm the exact location and extent of any required maintenance. Armor Rock C will be delivered to the site from the stockpiles at the Bluebonnet Landfill to a temporary on-site stockpile. A skid steer will be

used to transfer the armor stone from the temporary on-site stockpile to a small pontoon barge. Benchmark staff then will utilize the pontoon barge to transport the armor stone to each of the maintenance locations from the shoreline. Once loaded onto the pontoon barge, the stone will be transported and placed using hand tools at each respective maintenance location to ensure sufficient cap thickness is achieved over the exposed geotextile. Each location will be probed with a steel rebar rod to confirm complete coverage of the geotextile with the minimum cap thickness of at least 1 foot of stone.

Schedule

With your approval, Benchmark will begin these maintenance activities on Friday January 27 and should require 1 to 2 days to complete depending on weather and tides.

Please let us know if you have any questions about the proposed activities, and do not hesitate to contact me if you would like to discuss anything.

Sincerely,



David Keith
Project Coordinator

cc: Dave Moreira, MIMC
Phil Slowiak, IP
John Laplante, Anchor QEA
Wendell Mears, Anchor QEA

Attachments

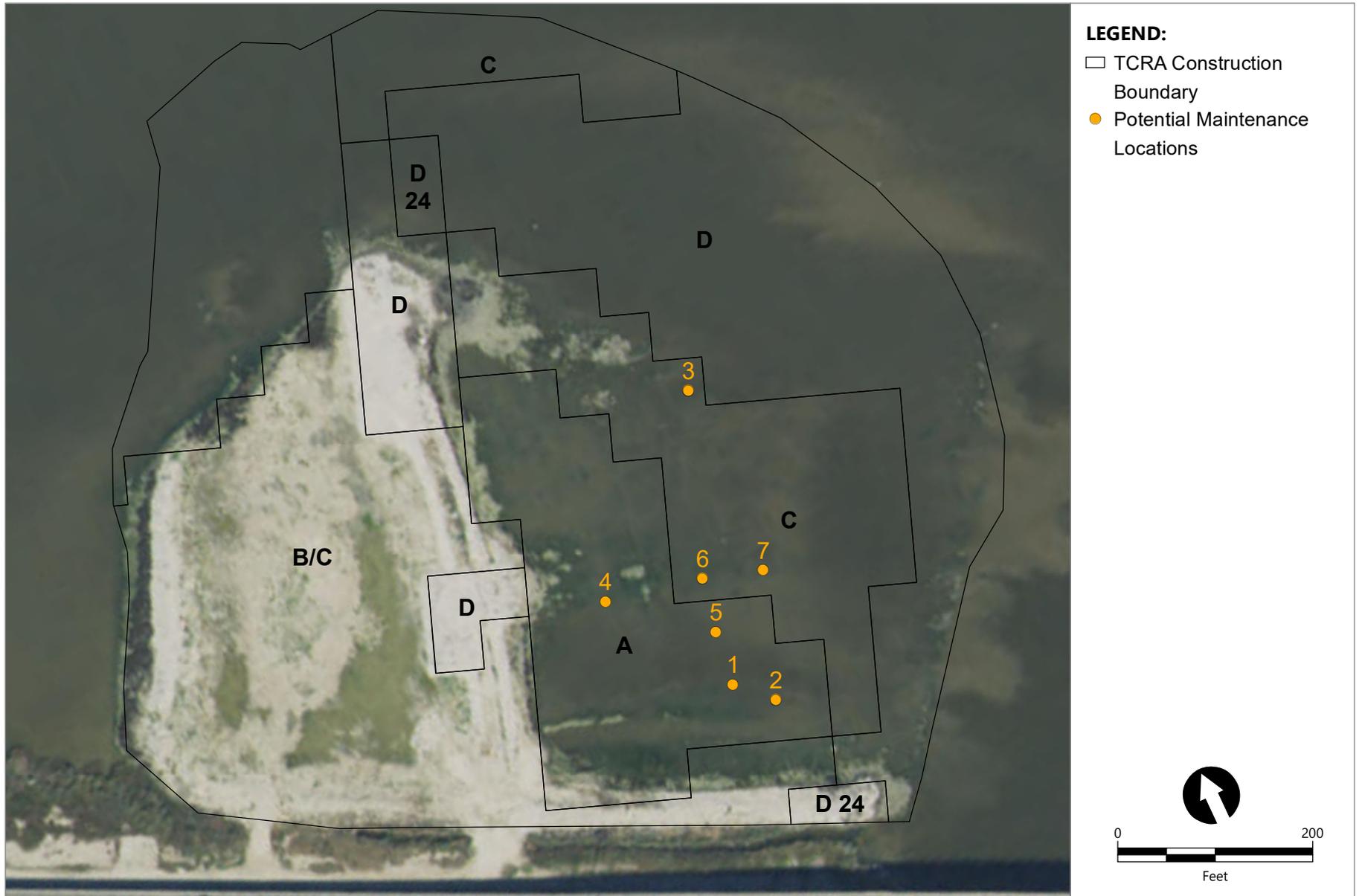
Table 1	Potential Maintenance Locations
Figure 1	January 2017 Potential Maintenance Locations
Attachment	Photograph Log

Table

Table 1
Potential Maintenance Locations

Maintenance Area	Latitude/Longitude Coordinates		Approximate Size (feet)	Rock Type
	xx	yy		
1	29.793894	-95.062285	2 x 2	A
	29.793909	-95.062290		
2	29.793800	-95.062183	2 x 2	A
	29.793802	-95.062217		
3	29.794691	-95.061982	2 x 3	C
4	29.794265	-95.062531	2 x 2	A
	29.794255	-95.062491		
5	29.794048	-95.062257	2 x 3	A/C
6	29.794199	-95.062216	2 x 2	C
	29.794189	-95.062186		
7	29.794143	-95.062029	2 x 2	C

Figure



Publish Date: 2017/01/26, 9:46 AM | User: dnganju
 Filepath: C:\D_DRIVE\Jobs\San_Jacinto\Documents\2017_FIELD_WORK\170123_POST_FLOOD_INSPECTION\layout_post_flood_inspection_170126.mxd

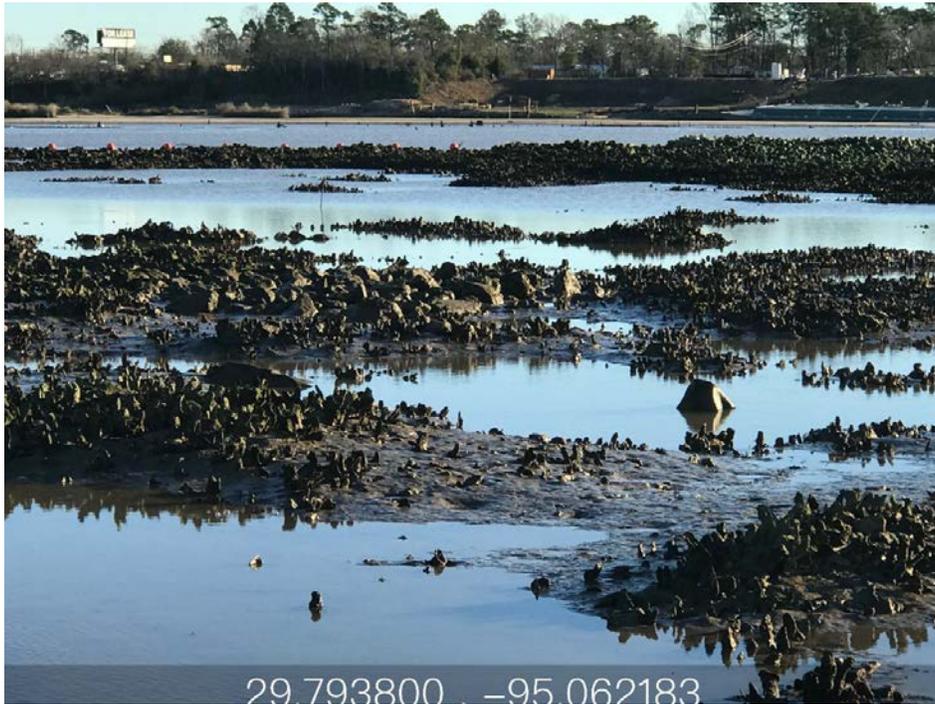


Figure 1
January 2017 Potential Maintenance Locations
San Jacinto River Waste Pits

Photograph Log



Photograph 1 – Potential Maintenance Area 1



Photograph 2 – Potential Maintenance Area 2



Photograph 3 – Potential Maintenance Area 3



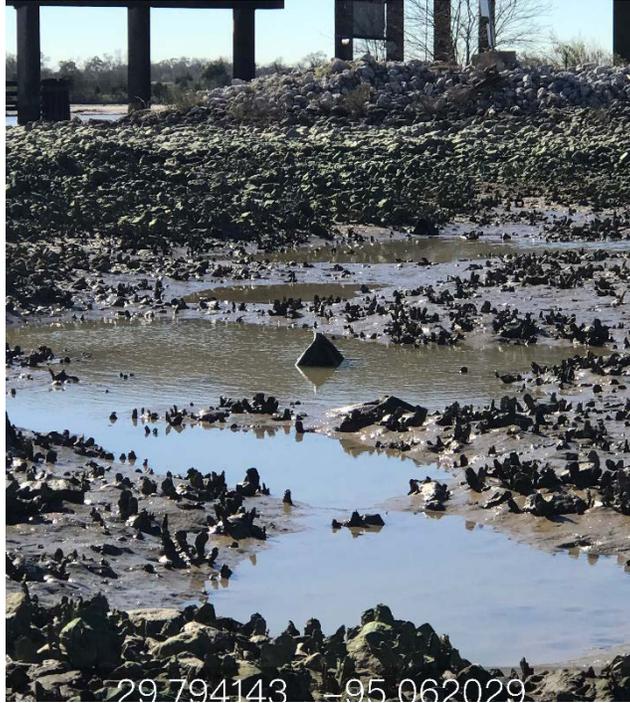
Photograph 4 – Potential Maintenance Area 4



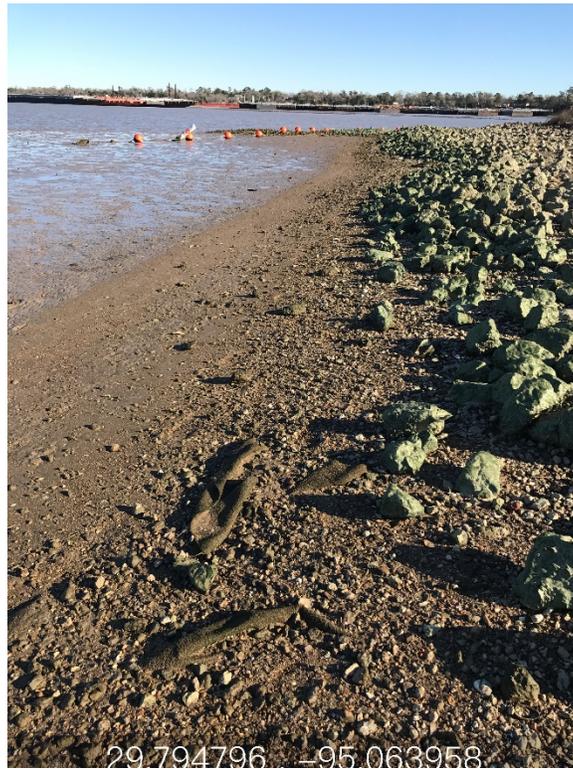
Photograph 5 – Potential Maintenance Area 5



Photograph 6 – Potential Maintenance Area 6



Photograph 7 – Potential Maintenance Area 7



Photograph 8 – Example Visible Geotextile along Western Edge of TCRA, Looking North

Attachment 2

USEPA January 26 Armored Cap
Maintenance Work Plan Approval

From: [Miller, Gary](#)
To: [David Keith](#)
Cc: [Dave Moreira \(dmoreira@wm.com\)](#); [Phil Slowiak](#); [Judy Armour \(jarmour@wm.com\)](#); [Rick Coupe](#); [Wendell Mears](#); [John Laplante](#); [John Verduin](#); [Sanchez, Carlos](#); [Foster, Anne](#); [Walters, Donn](#)
Subject: RE: San Jacinto Visual Inspection and Maintenance Plan
Date: Thursday, January 26, 2017 3:34:45 PM

David,

The EPA has reviewed and approves the referenced maintenance plan. Please proceed with this work as described.

Regards,

Gary Miller
Remedial Project Manager
EPA Region 6 Superfund Division, TX/Ark Section
214-665-8318
miller.garyg@epa.gov

From: David Keith [<mailto:dkeith@anchorqea.com>]
Sent: Thursday, January 26, 2017 2:09 PM
To: Miller, Gary <Miller.Garyg@epa.gov>
Cc: Dave Moreira (dmoreira@wm.com) <dmoreira@wm.com>; Phil Slowiak <philip.slowiak@ipaper.com>; Judy Armour (jarmour@wm.com) <jarmour@wm.com>; Rick Coupe <rcoupe@anchorqea.com>; Wendell Mears <wmears@anchorqea.com>; John Laplante <jlaplante@anchorqea.com>; John Verduin <jverduin@anchorqea.com>
Subject: San Jacinto Visual Inspection and Maintenance Plan

Gary – As we discussed this morning, please see the attached summary of the visual inspection of the armored cap at San Jacinto that was performed Monday, January 23rd, and recommended maintenance plan. We would like to start the maintenance tomorrow, pending your approval.

Thank you,
David

David Keith
Anchor QEA, LLC

Phone: 228-220-1156
Cell: 228-224-2983
dkeith@anchorqea.com

ANCHOR QEA, LLC
www.anchorqea.com

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Attachment 3

Armored Cap Probing and Maintenance

Daily Report



DAILY REPORT

PROJECT	San Jacinto River Waste Pits TCRA Adjacent Armor Rock Placement		CONTRACT NO.	
CONTRACTOR	Benchmark Ecological Services Inc.	SUPERINTENDENT	Matthew Jay (BESI)	
DAY OF WEEK & DATE:	Friday, January 27, 2017		REPORT NO.	34A
WEATHER	Overcast; winds out of NW.		TEMPERATURE	L: 41 H: 62 degrees F
NUMBER/CLASS OF CONTRACTOR'S PERSONNEL:		MAJOR EQUIPMENT ON JOB (Size/capacity and hours):		
2 – BESI		ATV		
<u>TIDE INFORMATION:</u>		<u>HEALTH AND SAFETY INFORMATION:</u>		
Time: n/a	Height:	n/a		
		No incidents or near misses on this date.		
<u>CHRONOLOGICAL ACCOUNT OF DAY'S WORK:</u>				
0700 – AQ on site.				
0740– BESI on site.				
0745 – AQ + BESI tailgate H&S meeting.				
0800 – BESI begins loading rock from stockpile and moving to shoreline for placement in eastern cell maintenance areas.				
0900 – BESI completes maintenance on locations 4 and 5.				
1010 – BESI completes maintenance on locations 6 and 7.				
1130 – BESI completes maintenance on locations 1 and 3.				
1315 – BESI adds rock to western area locations of geotextile tailings and location of previous repair.				
1400 – Thorough probing of location 2 reveals no areas of deficient cap thickness or exposed geotextile.				
1450 – BESI offsite.				
<u>Summary of Progress on this Date:</u>				
<ul style="list-style-type: none"> • BESI repaired locations 1,3,4,5,6, and 7, and placed rock on western area locations. 				
<u>Persons Onsite on this Date:</u>				
Rick Coupe (Anchor QEA)				
Matthew Jay, Russell Calvin (BESI)				

Material Delivery Summary as of this Date: (Stockpile material delivered previously by USA Environment to site stockpile area on 1/25/16)

Material	Units	Delivery (tons)	Delivery Verification Method	Preceding Delivered Total	Total Delivered for Project
Type C	Tons	15	Approx. truck load measurement	0	15

TESTS PERFORMED: None

PHONE LOG:

None.

SITE PHOTOS/VIDEOS TAKEN:

4 shown, 25 taken

FORCE ACCOUNT WORK/ CHANGES ENCOUNTERED:

None

QA REPRESENTATIVE	Rick Coupe	HRS	10.5	DATE	1/27/2017
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Photograph 1: BESI probing a maintenance location in preparation for repairs.



Photograph 2: Placing C rock on maintenance location 3.



Photograph 3: View of maintenance area 6 after repair.



Photograph 4: View of a western cell location after rock placement.